

Honors Geometry Summer Homework

Date _____ Period _____

Find the slope of the line through each pair of points.

1) $(11, 19), (-17, 9)$

2) $(1, 2), (5, 12)$

3) $(18, 4), (-8, -6)$

4) $(0, -18), (15, -20)$

5) $(16, -10), (-13, -8)$

6) $(14, -14), (-13, 19)$

Solve each equation.

7) $\frac{b}{13} = 18$

8) $-\frac{13}{14} = \frac{m}{14}$

9) $7 + a = 24$

10) $\frac{a}{4} = -4$

11) $8(-5 + 5v) = -160$

12) $3n - 7(-3n - 3) = 141$

13) $150 = -3(6x - 8)$

14) $-4 - 3x = -(8 + x)$

15) $-6(3n + 7) - n = 4n + 4$

16) $3 + 7p = 3(2p + 1) - 2$

17) $-4 = \frac{-5 + m}{2}$

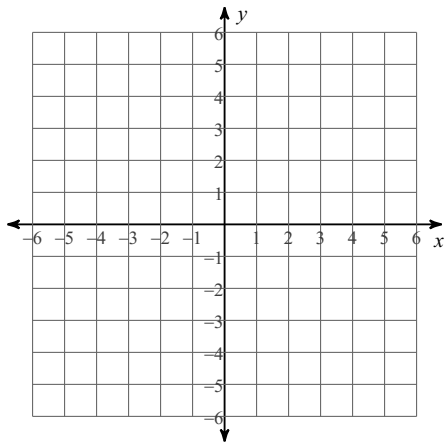
18) $-10 - 5b = -35$

19) $-71 = 5 + 4n$

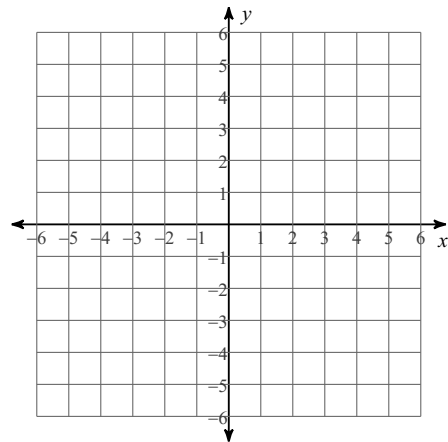
20) $-1 = \frac{2 + b}{14}$

Sketch the graph of each line.

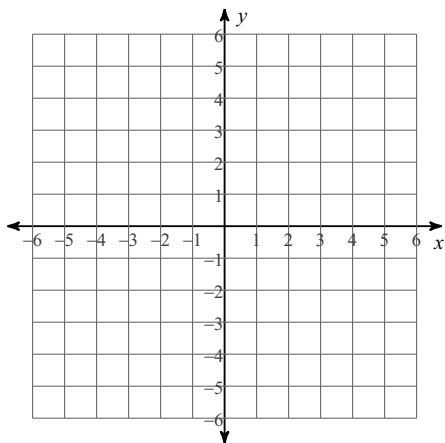
21) $y = -3x + 2$



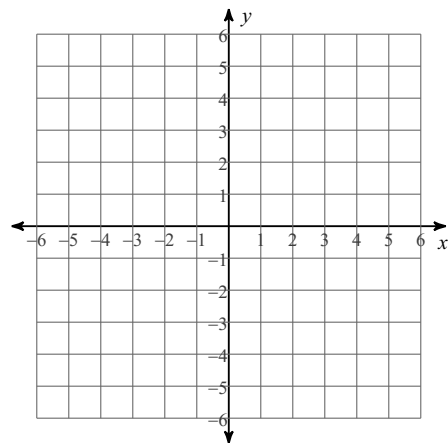
22) $y = -2x + 5$



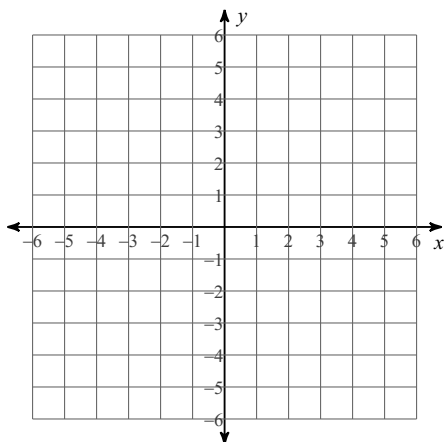
23) $y = -9x + 4$



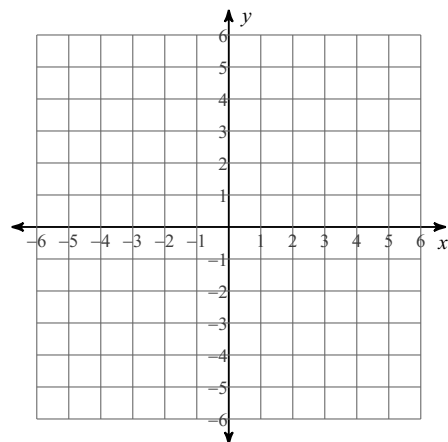
24) $2x + y = -3$



25) $7x - y = 4$



26) $x + y = 0$



Find each product.

27) $(5n + 4)(n - 1)$

28) $(5r + 2)(r + 4)$

29) $(x - 7)(7x - 6)$

30) $(4p + 2)(5p - 4)$

Evaluate each expression.

31) $(6 - 4)^2$

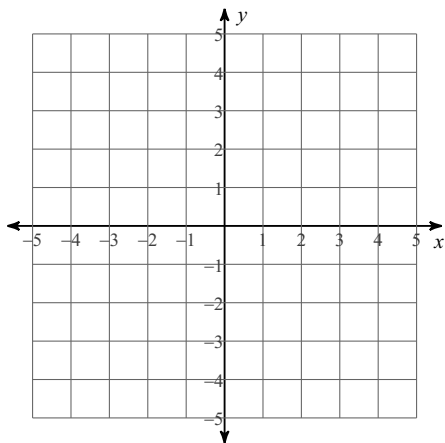
32) $(4 - 3)^2$

33) $6 - (3 - 2)$

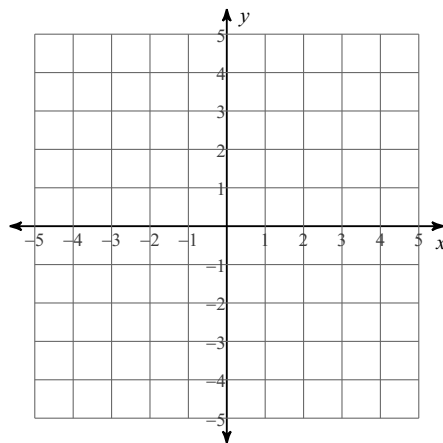
34) $(16 - 1) \div 3$

Solve each system by graphing.

35) $y = x + 1$
 $y = \frac{1}{4}x - 2$



36) $y = \frac{5}{4}x + 2$
 $y = \frac{5}{4}x - 2$



Solve each system by substitution.

37) $y = -8x + 24$
 $-x - 3y = 20$

38) $-7x + 5y = 0$
 $y = -3x + 22$

39) $x + 6y = 12$
 $-x + 2y = -4$

40) $7x + 2y = -24$
 $-5x + y = 5$

Solve each system by elimination.

41) $4x - 6y = 10$
 $-6x + 6y = -24$

42) $-x - 3y = 5$
 $x + 4y = -4$

43) $8x - 4y = -8$
 $-16x + 9y = 12$

44) $10x - 10y = 10$
 $7x + 2y = 7$

Factor the common factor out of each expression.

45) $21b^3 - 21b + 18$

46) $72r^8 + 32r^7 + 72r^6$

47) $14m^5 + 28m^3 - 7m^2 + 35m$

48) $42k^4 - 56k^3 + 21k^2 + 70k$

Factor each completely.

49) $v^2 + 7v$

50) $n^2 + 9n + 14$

51) $p^2 + 3p - 10$

52) $k^2 - k - 20$

Simplify. Your answer should contain only positive exponents.

53) $3b^4 \cdot 4ab^3$

54) $3yx^4 \cdot x^4$

55) $2y^3 \cdot 2y$

56) $(2x^2y^4)^2$

57) $(ab^3)^4$

58) $(3x^4)^3$

59) $\frac{3x^2y^3}{3x^4y^2}$

60) $\frac{2uv}{vu^2}$

61) $\frac{3y^4}{x^2}$